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cont'd

from the group consisting of gold and palladium, and wherein the wirebond interconnect includes a gold wire.

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### REMARKS

Claims 1-13 are currently pending.

The Examiner objected to the amendment filed January 17, 2002 under 35 U.S.C. §132 because it allegedly "introduces new matter into the disclosure. 35 U.S.C. §132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the circuit line...is not embedded into the substrate. Applicant is required to cancel the new matter in the reply to this Office Action."

The Examiner rejected claims 1-13 under 35 U.S.C. §112, first paragraph, as allegedly "containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The non-enabled matter is that 'the circuit... is not embedded in the substrate'." In response, Applicants have amended the specification to overcome the rejection without adding new matter.

Applicants respectfully traverse the §132 rejection with the following arguments.

### 35 U.S.C. §132

Applicants respectfully contend that the amended feature in claim 1 of "the ... circuit line...is not embedded into the substrate" is not new matter, as supported by the combination of

the following two facts. The first fact is that the method for forming circuit lines, as described in the specification, results in the formation of circuit lines that are not embedded in the substrate. The second fact is that formation of circuit lines that penetrate into the substrate is not enabled by the specification. Consequently, Applicants maintain that the negative limitation of “the ... circuit line...is not embedded into the substrate” is inherent in the specification.

The first fact is that the method for forming circuit lines, as described in the specification, results in the formation of circuit lines that are not embedded in the substrate. The first fact is evidenced as follows. In FIG. 3, the circuit lines **30**, **32**, and **34** result from the method described in the specification and the circuit lines **30**, **32**, and **34** are shown in FIG. 3 as not embedded into the substrate **10**. In FIG. 8, the circuit lines **70**, **72**, and **74** result from the method described in the specification and the circuit lines **70**, **72**, and **74** are shown in FIG. 8 as not embedded into the substrate **10**. In FIG. 10, the circuit lines **210**, **220**, and **230** result from the method described in the specification and the circuit lines **210**, **220**, and **230** are shown in FIG. 10 as not embedded into the substrate **204**. In FIG. 11, the circuit lines **310** and **320** result from the method described in the specification and the circuit lines **310** and **320** are shown in FIG. 11 as not embedded into the substrate **304**. In FIG. 12, the circuit lines **410** and **420** result from the method described in the specification and the circuit lines **410** and **420** are shown in FIG. 12 as not embedded into the substrate **404**.

The second fact is that formation of circuit lines that penetrate into the substrate is not enabled by the specification. To illustrate, consider foil layer **14** on the top surface **18** of the substrate **10** in FIG. 1. All circuit lines coupled to the top surface **18** are formed from the foil layer **14**. As an example, the circuit lines **30** and **32** in FIG. 3 were formed from the foil layer **14**

(e.g., by photolithography followed by subtractive etching). Since the foil layer **14** is described in the specification as existing on the top surface **18** of the substrate **10** and is not disclosed in the specification, or shown in any FIGURE, as penetrating into the substrate **10** there is no way that the method of forming the circuit lines **30** and **32**, as described in the specification, could ever result in the circuit lines **30** and **32** penetrating into the substrate **10**. As another example, the circuit line **70** in FIG. 8 was formed from the foil layer **14** by plating metal on top of the foil layer **14**, which is remote from the substrate **10**, to form the top metal layer **50** (see FIG. 6 and specification, page 15, line 20 - page 6, line 11) from which the circuit line **70** is formed by subtractive etching as shown in FIG. 8 and described in the specification on page 17, lines 1-10. Since the foil layer **14** is described in the specification as existing on the top surface **18** of the substrate **10** and is not disclosed in the specification, or shown in any FIGURE, as penetrating into the substrate **10** there is no way that the method of forming the circuit line **70**, as described in the specification, could ever result in the circuit line **70** penetrating into the substrate **10**. All other circuit lines disclosed in the specification are formed by the same methods as are disclosed for forming the circuit lines **30**, **32**, and **70**. Accordingly, the specification does not teach how to form a circuit line that penetrates into the substrate. Thus, formation of circuit lines that penetrate into the substrate is not enabled by the specification.

Applicants offer another argument supporting that the amended feature of “the ... circuit line...is not embedded into the substrate” is inherent in the specification. If (hypothetically) Applicants were to amend claim 1 by adding the additional feature of “the ... circuit line...is embedded into the substrate” to claim 1, there is no doubt that the Examiner would assert that said additional feature is new matter, since there is nothing in the FIGURES or the specification that

supports said additional feature. However, if the additional feature is new matter then the amended feature "the ... circuit line...is not embedded into the substrate" cannot be new matter. If both the amended feature and the additional feature were new matter, then the very existence of the circuit line would be new matter, since a given location on a circuit line shown in the FIGURES (and described in the specification) as coupled to the substrate must either penetrate or not penetrate into the substrate, as the only two logical possibilities. Thus, Applicants respectfully contend that the amended feature of "the ... circuit line...is not embedded into the substrate" is inherent in the specification.

#### CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all claims 1-13 meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invite the Examiner to contact Applicants' representative at the telephone number listed below.

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Schmeiser, Olsen & Watts  
3 Lear Jet Lane  
Latham, New York 12110  
(518) 220-1850

Jack P. Friedman  
Jack P. Friedman  
Registration No. 44,688